

## **DISTURBANCES DUE TO DISEASE OF THE VERUMONTANUM AND ITS TREATMENT WITH THE POSTERIOR URETHROSCOPE.\***

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WORK upon the posterior urethra through the urethroscope during the past eight or nine years has convinced me that it is a valuable aid and a distinct advance in the treatment of trouble in that portion of the genito-urinary tract, and that many obscure symptoms may be found to be due to disease or to some pathological condition of the verumontanum, or of the urethral floor in its immediate vicinity.

The most common cause of trouble in this part is, of course, chronic gonorrhœa, though I have had a large number of non-venereal cases in which trouble with the verumontanum seemed to be the disturbing element. The association, further, in many of these cases of an oxaluria has made me believe that this might be a factor in the pathogenesis of both these classes of cases. At the same time, while in some cases of oxaluria attention to the digestive tract has been sufficient to clear up the symptoms, in others the symptoms have persisted until the posterior urethra has been treated through the urethroscope. The following case seems to me to be typical of this condition.

B. D., 19 years old, consulted me as recently as March 14, 1908. For three years he has been troubled by persistent and frequent nocturnal emissions, constipated habit, facial acne, clammy hands. Has been obliged to give up studies which he was pursuing at night, while working during the day, so that he feels he can make no advance, unless his condition can be relieved.

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During this time has been almost constantly seeking relief of one physician after another. During the week preceding his coming to consult me, had had emissions every night. The urine was loaded with oxalate of lime crystals. Never had venereal disease. There was a slight mucoid discharge which can be squeezed out of the urethra; contains bacteria, but no gonococci. The prostate and vesicles reveal nothing to the examining finger. Examination of the posterior urethra showed the entire verumontanum to be much swollen, very hyperæmic, bleeding very easily on touch with the cotton swab, and also on relief of pressure as the mucous membrane comes up into the window of the instrument during its gradual withdrawal. The entire floor of this portion of the canal was freely swabbed with a 10 per cent. solution of silver nitrate, or what is practically the same thing, argentamine in full strength. Attention was also paid to the digestion with a view to eliminating the oxaluria. The patient received five such applications at weekly intervals. At the last examination on April 11th the verumontanum was perfectly normal as seen through the urethroscope, it was not hyperæmic, it did not bleed. The oxalate of lime crystals were not found after the first examination and during these four weeks he had had but one nocturnal emission.

I do not mean to say that this case is by any means cured, but a healthier condition of the posterior urethra, especially the verumontanum, has been brought about more quickly than by any means with which I am acquainted, and it so clearly illustrates one phase of this condition, that of the simplest, that I cite it here.

In my experience this has generally been the condition of the verumontanum which has been found in these non-venereal cases:—a swelling and a hyperæmia of the entire verumontanum and a marked tendency to bleed easily.

In the cases which have been dependent upon a chronic gonorrhœa there has been a great variety in the urethroscopic picture as well as in the symptoms. In many of the cases in addition to the hyperæmia and swelling which is almost always present with the tendency to bleed on slight touch, there is a real hypertrophy as if due to a round-cell infiltration, and there is irregularity in the shape of the verumontanum and

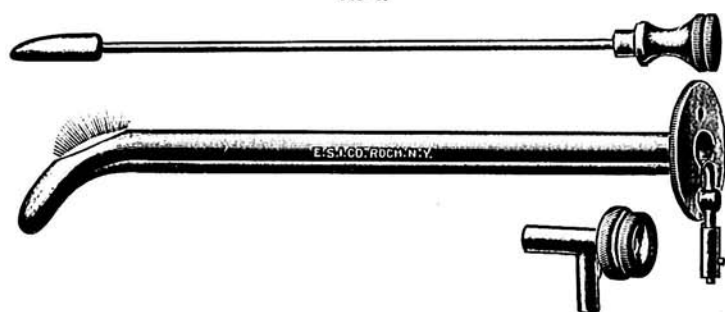
variations in the appearance of the surface of the mucous membrane, in some cases dull and dry and deeply reddened, or the surface is granulating, or there is a small granulation patch here, and there a small area looking like a bit of raw beef, and the general surface very irregular. There may be small excrescences looking like polypi springing from the surface of the verumontanum, there may be a small granulation tumor, a granuloma. This latter condition I have met with in two cases, and I can recall but two cases in which I have met with polypi.

The symptoms vary; there may be a simple mucoid or mucopurulent drop in the morning, or this condition may be constant without other symptoms. The urethra, on the other hand, may be perfectly dry. There may be a neurasthenic condition of any varying degree, and it may in some cases be accompanied by frequent nocturnal emissions and even diurnal. The seminal secretion may be blood-stained. There is in some cases—and this, I think, I have found in the majority of the cases—premature ejaculation or there may be complete impotence. Some of the cases complain of pain; this may vary from a slight feeling of discomfort along the urethral canal, or a tickling or a burning sensation, to a sharp lancinating pain. This pain or discomfort may, in some cases, be referred to the navicular fossa, or to the perineum, or to the deep urethra in front of the rectum, or over the pubes, sometimes over the sacrum. It may not be of great severity. In some cases there may be pain in the deep urethra, as if a foreign body were present. These pains are generally independent of the act of urination, or the pain may come only at the end of urination. Neuralgia of the testicle or in the sciatic region I have met with.

I have not attempted to give a complete account of all the symptoms which seem to be due to disease of the verumontanum, but only the most prominent and characteristic. I have presented this paper with a view to exhibiting to this society my instrument, already no doubt well known to you, to give

the reasons why I believe it to be the most practical working instrument to-day for dealing with the posterior urethra, finding, the more I have worked with it, the more satisfactory it has become. It was after considerable experience with the straight tube in the posterior urethra with the cold lamp, that I felt that a curved tube would prove more comfortable to insert, and it was in November, 1900, that I first ordered an instrument so constructed. The first sent me had the light in the beak, as in the *aëro-cystoscope*; I then saw that the light must be in front of the window for proper illumination, as the floor of the urethra filled the window and the mucous membrane was illuminated by transillumination. In January, 1901, I obtained the first practical instrument, the beak was left hollow, however, and my experience with one case, which is related below, led me to have this remedied. The first method to remedy this, was to fill the beak with cement, which was not satisfactory; afterwards it was filled with metal, as in the present instrument (Fig. 1). Three sizes were made: 24, 26 and 28 F., but of late years I find I use the size 24 almost to the exclusion of all others. An objection made to the instrument has been that one could not see lesions on the roof of the posterior canal. In working with the straight tube, I never saw any lesions in the roof. Most of the lesions are about the *verumontanum*. I have also come to prefer an instrument in which the Koch auxiliary chamber keeps the lamp out of the way, when treating the mucous membrane. I have had instruments made, in which the lamp was in the tube itself, for use either with the Chetwood lamp or the Otis light, but the Chetwood lamp interfered with swabbing, and the Otis light in my hands does not give as good illumination, nor is it so convenient in treating cases. In one instrument there was an attachment with window, so that air dilatation could be used in the posterior urethra, but I have not found that the surface is any better illuminated; lesions cannot be treated without removing the apparatus; and then, too, any moisture in the canal is blown through the chamber carrying the light, which interferes with

FIG. 1.



Posterior urethroscope.

vision and might be productive of danger to the eye of the operator. Though this could be obviated, I have not attempted to do so.

In inserting the instrument, the patient lies on the table, hips slightly raised, the lamp is tested before being placed in the instrument, then the cord is detached. While inserting it I stand on the patient's right and insert the instrument as in passing a sound. When the beak reaches the cut-off, I change the instrument from the right to the left hand, pressing down above the pubes with the right hand, while with the left I gently push the instrument into the deep urethra until it has reached the point I wish, which should be so that the very posterior tip of the verumontanum with the portion of urethra posterior to it will come into the window. The cord is then attached, the broad shield is grasped between the finger and thumb of the right hand and held perfectly still, the wrist and palm of the hand resting on the symphysis, and then I gently withdraw the obturator. If the instrument has not been inserted far enough,—I can tell this by the appearance,—I often push the instrument deeper while looking through it at the window, without reinserting the obturator. If the instrument has passed too deep, and there is urine in the bladder, it will come into the tube. If there are only one or two drops, it can be removed with the cotton swab; if more comes, I withdraw the instrument and reinsert it.

Almost the only treatment which I have applied to the posterior urethra has been a 10 per cent. solution of silver nitrate or argentamine in full strength. In the March number of the *Zeitschrift f. Urologie*, 1908, p. 219, I have noted that Wossidlo, of Berlin, in an article on this subject, has used 20 per cent. silver nitrate and in some severe cases has used the electrocautery, applying it directly to the diseased portion. In this article Wossidlo presents an instrument very similar to mine, but the lamp is in the same chamber, and for that reason I do not think it as practical; furthermore, the manner of inserting the light renders the calibre through which the applications are made, smaller than the calibre of the tube. I

should think, however, that for granuloma or polypi the electrocautery would prove an excellent aid.

The manipulations, of course, are done under aseptic precautions. There is no after-pain in making application with this strong solution of silver nitrate and, as a rule, no discomfort except for the burning sensation at the next two or three times of urination, even though the cotton swab is soaked with the solution and freely applied, whereas I think, all will acknowledge the extreme discomfort of silver nitrate in much weaker solution, when applied through the instillator, an instrument I but very seldom use now. Furthermore, the latter is applied in the dark and does not reach the whole of the portion intended. Then, too, I have treated and cured many cases with the urethroscope that had had the instillation method applied for months by other operators.

I never use the urethroscope while gonococci can be demonstrated to exist, and seldom use it for treatment until all other pathological conditions, as trouble in the anterior urethra or prostatitis and seminal vesiculitis, have been removed so far as possible. These lesions are always treated until they seem incapable of further improvement; then, if the case seems to need it, I employ the urethroscope. I have sometimes had cases in which the gonococcus for a long time could not be demonstrated; one case I remember, in which marriage had been sanctioned by two competent men, in which after one or two or more applications through the urethroscope, a urethral discharge started up containing gonococci, and that, too, without further exposure to infection. When this has happened, and it has happened often enough for me to be on the lookout for it, I refrain from further use of the urethroscope until the trouble subsides. I have noted in some cases, having as a symptom frequent nocturnal emissions with an accompanying vesiculitis and prostatitis, that, while at first massage and treatment directed to these parts helped that symptom, it would return again, even while the treatment was carried on. In my experience these cases need treatment with the urethroscope.

The treatment is carried on by making the application once a week only—seldom have I ever made the intervals shorter, though in a few cases I have made them at intervals of five days. The average number of treatments has varied from three to twelve, sometimes more, but in such cases the intervals have been lengthened to once in two weeks and even longer as the condition has improved.

The following cases present interesting points:

CASE I.—H. B., 26 years old, was treated for an acute gonorrhœa in the spring of 1899,—it was his second attack. His first attack had occurred six years before and he had always after that suffered from its results. The present attack followed the only exposure since the first attack. Following his first attack he had had a double epididymitis, which occurred nine months after its beginning. After that he had had an internal urethrotomy performed, after this he suffered a good deal from neuralgia of frequent recurrence in the left testicle, had been treated for prostatitis and seminal vesiculitis by massage, without benefit to the condition of neuralgia. When he came to me, he had had these attacks of neuralgia for four years. He presented a mild degree of neurasthenia, and strongly objected to any urethral instrumentation, as he had had so much of it without benefit and had suffered much pain in consequence. Nevertheless, after his gonorrhœa had subsided, I persuaded him to consent to a urethroscopic examination of the posterior urethra. The verumontanum was much enlarged and the anterior half presented a granulating patch which I swabbed freely with a 10 per cent. solution of silver nitrate, and thereafter made five or six similar applications a week apart. He never had a return of the neuralgia after the first application, and at the last application the urethra presented a normal aspect.

The difficulties met with in this case especially brought me to consider the instrument which I had made.

CASE II.—A. M., 29 years old, came to the dispensary in the latter part of 1900, having a chronic gonorrhœa. Had recently come out of the hospital, where he had been laid up with double epididymitis. He had lost flesh and strength, his urine was very cloudy, his prostate was very much enlarged and he was still under treatment for his epididymitis. He suffered from consider-



able pain in the deep part of the canal, and in January, 1901, I examined him with the posterior urethroscope, he being one of the first cases on which I had used it. The passage of the instrument caused much pain, on withdrawal of the obturator the verumontanum came into the window. It was much hypertrophied, the surface was granulating, and in its middle portion appeared a small tumor like a granuloma. The surface was thoroughly swabbed, but on withdrawing the instrument, the tumor was found to have been curetted off and was in the beak of the instrument. It was followed by only a slight amount of bleeding, and several applications were made after this, and the patient was greatly improved and disappeared. Subsequently, five years later, he presented himself at my office, having an oxaluria, and, in conjunction with treatment for that condition, I had occasion to treat the posterior urethra for a congested condition making about four or five applications. Outside of this condition the canal was normal, and it was interesting to see it so many years after a considerable pathological condition had existed.

It was the accident occurring in this case which fortunately was a beneficent one, which led me to have the beak of the instrument filled to prevent a similar subsequent occurrence.

In many of these cases which I have thus treated, I have had occasion to re-examine the urethra after a longer or shorter interval following a course of treatment, and have been struck by the normal appearance of the verumontanum.

When I began urethroscopy of the posterior urethra, I feared the possibility of one accident, hemorrhage into the bladder from a profuse bleeding from this surface, but as time went by and no such accident occurred in any of the very great number which I have treated—I have the records of over a hundred cases during that time in my office practice and certainly many more in my dispensary work—I began to think this danger a slight one. Nevertheless, it did occur in the practice of one of my assistants last year. One Sunday morning, about eight o'clock, he telephoned me he was sending up a patient he wished me to see. The man came to my office suffering extreme pain. He had a constant tenesmus, made constant efforts at urination, and only a few drops of blood

passed. The distended bladder could be felt above the symphysis, a hard mass the size of a cricket ball; pressure over this tumor increased the pain immensely. Before sending him into a hospital, I thought I would see what could be done to relieve him. I passed a silk-woven catheter into the bladder, drawing off only a little blood, and then washed out the bladder as gently as possible with a warm solution of alphozone (quite hot), following this with a weak solution of peroxide, and then finished with a weak solution of adrenalin. Although the bleeding was not entirely stopped, he was much more comfortable, after I had succeeded in removing all the clots and while doing this elicited his history. For some time previous he had had massage of his prostate and then was subjected to a course of treatment with the urethroscope, having been treated with it about seven times in all, the last one being on the previous afternoon, when he was told that there was no more need of treatment. No bleeding had followed this last treatment, and at ten o'clock that evening he had passed a perfectly clear urine; but at one o'clock in the morning, while at work (he was a baker), he had occasion to urinate, when he was much frightened to find he was passing what appeared to be pure blood. This was quickly followed by the sensation of a full bladder and constant efforts to urinate with the passing of blood, until he was sent to me that morning.

I gave him urotropin and sent him home to bed, and visited him that evening; he had, during the day, passed rather frequently blood-tinged urine, but no blood or clots; he was very sore. The urine continued blood-tinged for forty-eight hours, then passed away. Two weeks later I made a cystoscopic examination of the bladder and found it normal.